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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,457	07/09/2003	Manfred Herrmann	GP-301716	1034
7590	04/23/2007		EXAMINER	
CARY W. BROOKS General Motors Corporation Mail Code 482-C23-B21 P.O. Box 300 Detroit, MI 48265-3000			ONEILL, KARIE AMBER	
			ART UNIT	PAPER NUMBER
			1745	
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			04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

**Application No.**

10/616,457

**Applicant(s)**

HERRMANN, MANFRED

**Examiner**

Karie O'Neill

**Art Unit**

1745

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 4-11-2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a)  The period for reply expires 4 months from the mailing date of the final rejection.  
 b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a)  They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b)  They raise the issue of new matter (see NOTE below);  
 (c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d)  They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-25, 30-33 and 44-48.

Claim(s) withdrawn from consideration: 49-51.

**AFFIDAVIT OR OTHER EVIDENCE**

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
 See Continuation Sheet.

12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_

13.  Other: \_\_\_\_\_.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's principal arguments are:

- (a) Condit et al. do not disclose the limitations "wherein said tests are conducted outside of a test chamber".
- (b) Condit et al. do not teach a mixture comprising substantially 95% nitrogen and 5% hydrogen.
- (c) Examiner fails to address the limitation "a measurement is made of a quantity of said mixture emerging from at least some of the lines, a sum is formed of the emerging quantities and is compared with fed-in quantities to determine leakage".
- (d) Bailey et al. do not disclose the limitations "wherein said tests are conducted outside of a test chamber".
- (e) Bailey et al. fail to disclose, "supplying said picture from a mixture tank".
- (f) Examiner fails to address the recitations, "a portion of the fuel in said mixture is increased" and "said second test is carried out...with a degenerated mixture without inert gas".

In response to Applicant's arguments, please consider the following comments:

- (a) Examiner asserts that the tests were conducted in an ambient environment, which constitutes an environment that is not a controlled environment, essentially being the same environment as that which is outside of a test chamber.
- (b) Condit et al. disclose using a concentration of 4% hydrogen with a remaining balance of the mixture being inert gas, preferably nitrogen. Condit et al. also disclose using 10% hydrogen concentration as an upper limit, the balance being inert gas, preferably nitrogen, and the range of 4% to 10% encompasses Applicant's claimed "substantially 5% hydrogen".
- (c) Condit et al. disclose in column 8 lines 22-39, a test for measuring the hydrogen concentration present during storage because during storage hydrogen may leak out of the system. The hydrogen concentration within the anode flow field is monitored with a hydrogen sensor and more hydrogen or hydrogen rich fuel is added into the system in order to maintain a desired range of hydrogen. This test is conducive with measuring for leaks, because if there is no change in the hydrogen concentration within the anode flow field, no leakage has occurred. If there is a change in the hydrogen concentration within the anode flow field, it is obvious that a leak is present at some point in the system.
- (d) Examiner asserts that the tests were conducted in an ambient environment, which constitutes an environment that is not a controlled environment, essentially being the same environment as that which is outside of a test chamber.
- (e) Bailey et al. disclose in column 1 lines 42-49, the fuel stream supplied to the anode is a gas of pure hydrogen or a reformate stream comprising hydrogen and other fluid components including nitrogen. The fact that the fuel contains other components, such as nitrogen, makes it a mixture and the tank from which the gas is supplied is considered a mixture tank that contains a mixture of gases, for example hydrogen and nitrogen.
- (f) Condit et al. disclose in column 3 lines 6-23, a range of hydrogen concentration present in the fuel gas, from 0% to 10%. Therefore, a portion of the fuel in said mixture could easily be increased and decreased based upon the level of hydrogen that is needed to be present upon start-up or shut-down of the fuel cell and for safety reasons. Condit et al. also states that having 100% hydrogen (hydrogen gas without inert gas) throughout the cells would work fine, but is difficult and costly, not impossible..



DAH-WEI YUAN  
PRIMARY EXAMINER